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CLASSIFICATION : SECRET

CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

REPORT [redacted] 25X1

CD NO.

COUNTRY East Germany

620529

DATE DISTR. 15 July 1954

SUBJECT Production of Maniperm by VEB Keramische Werke, Hermsdorf

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THIS IS UNEVALUATED INFORMATION

[redacted]

[redacted]

for permanent magnets in loudspeakers, dynamos, tachometers, etc. [redacted] Because of its small eddy loss, Maniperm can also be used in high-frequency circuits for polarization.

2. Maniperm, which consists of about 12 percent barium, 60 percent iron and 28 percent oxygen, has the following chemical composition: $Ba\ Fe_{12}\ O_{19}$. The He[redacted] enterprise developed it mainly as a substitute for materials needed [redacted] fabrication of permanent magnets which are in short supply in Eas[redacted]y, such as cobalt, nickel, chromium, tungsten, etc. According to the management of the plant, one kilogram of Maniperm can be substituted for 140 grams of aluminum and 300 grams of nickel, replacing the aluminum-nickel alloy known as "Alni"; the same quantity of Maniperm can be substituted for 30 grams of aluminum, 81 grams of cobalt, 14 grams of copper, 52 grams of nickel and 3 grams of titanium, replacing the alloy composed of the aforementioned materials known as "Alnico".

3. The following are technical data on Maniperm:

Remanence	about 2,000 G
B-coercivity	about 1,600 Oe
I-coercivity	about 3,100 Oe
Maximum magnetic energy	about $0.8.10^6$ G.Oe
Saturation induction	about 4,500 G
Saturation field force	about 8,000 Oe
Curie point	about 450 centigrades
Specific resistance	more than 10^3 Ohm.cm
Specific weight	about 4 g/cm^3
Reversible permeability	about 1

[redacted] called [redacted] Keramisches Werk [redacted]

1. [redacted] Comment. Formerly called VEB Keramisches Werk Hescho-Kahla, Hermsdorf, Thuringia. 25X1

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